

August 19, 2008

Mr. Steve Spurlin
Federal On-Scene Coordinator
U.S. Environmental Protection Agency, Region 4
Ed Jones Federal Building
109 South Highland Avenue, B-13
Jackson, Tennessee 38301

Subject: Comprehensive Environmental Response, Compensation, and Liability Act

Removal Assessment Letter Report Clinton Smelter / Magnet Mills Site Clinton, Anderson County, Tennessee EPA Contract No. EP-W-05-054 TDD No. TTEMI-05-003-0041

Dear Mr. Spurlin:

The Tetra Tech EM Inc. (Tetra Tech) Superfund Technical Assessment and Response Team (START) is submitting the removal assessment letter report for the Clinton Smelter / Magnet Mills Site in Clinton, Anderson County, Tennessee (Appendix A, Figures 1 and 2). This letter report summarizes field activities conducted at the site on May 1, 2008.

This letter report has been prepared under Technical Direction Document (TDD) No. TTEMI-05-003-0044, which the U.S. Environmental Protection Agency (EPA) Region 4 assigned to Tetra Tech START under Contract No. EP-W-05-054. The overall scope of this TDD, monitored by EPA Federal On-Scene Coordinator (OSC) Mr. Steve Spurlin of the Emergency Response and Removal Branch (ERRB), was to provide responders, equipment, supplies, and services necessary to conduct a removal assessment at a former smelter and textile mill in Clinton, Anderson County, Tennessee. Specific elements of this TDD include:

- Document site activities using logbooks (see Appendix B) and photographs (see Appendix C)
- Collect multimedia samples necessary to characterize site conditions
- Procure a laboratory for sample analysis
- Conduct field hazard categorization, as necessary, to characterize suspect hazardous materials
- Track costs and report to EPA via Removal Cost Management System Form 1900-55
- Produce this Removal Assessment Letter Report

This Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) removal assessment letter report discusses the site background, site activities and sampling, and conclusions. Appendix D contains a list of witnesses and contacts associated with the site; a list of materials discovered at the facility is included as Appendix E; and a copy of the Cursory Data Validation Report prepared by Tetra Tech, including the results of sample analysis, is included as Appendix F.

#### SITE BACKGROUND

The site is located at 101 Collum Street in Clinton, Anderson County, Tennessee (see Appendix A, Figure 1). Zinc smelting operations ceased at the site prior to 1906, and the exact location of the former smelter is unknown. Magnet Knitting Mills of Clinton, Tennessee, began operation at the site in 1906 and was incorporated in 1929 as Magnet Mills, Inc., a locally owned and operated hosiery mill. The mill closed in March 1967. Approximately six warehouse-type buildings occupy the site (see Appendix A, Figure 2). Many of the warehouses are in disrepair and some are partially collapsed.

Site background information was obtained from Mr. Burl Maupin of the Tennessee Department of Environment and Conservation (TDEC). TDEC officials visited the site and observed suspected unsecured hazardous materials, including drums of polychlorinated biphenyl (PCB) oil, pesticides, and solvents; asbestos-containing materials, and lead-acid batteries. TDEC officials also collected X-ray fluorescence readings from several soil samples collected at the site. Mr. Maupin contacted OSC Spurlin and requested that EPA ERRB conduct a removal assessment. Trip reports, including photographs, from TDEC site visits on April 3 and 7, 2008, are included as Attachment 1.

The current owner of the site is Clinch River Properties, L.L.C. (CRP), which is owned by Mr. Yuh-Ching (Eugene) Huang and Mr. David Comer. A portion of the southern end of the property was sold to CVS Pharmacy. Mr. Comer operates a business at the facility that buys and sells materials and equipment and supplies from other businesses. Typically, the seller is going out of business, and Mr. Comer purchases the materials at auction or in lots from eBay or similar clearinghouses. Items purchased in lots often include chemicals, some of which are hazardous, along with other merchandise.

#### SITE ACTIVITIES AND SAMPLING

#### May 1, 2008

OSC Spurlin, supported by Mr. Chris Draper and Mr. Jody Sumner of Tetra Tech START, arrived at the site at 1200 hours and met with Mr. Maupin. Mr. Comer and Mr. Huang conducted a tour of the facility, including the locations of chemicals and suspected hazardous materials, and described current operations. Appendix E contains an inventory of the materials discovered at the facility.

Throughout the tour, OSC Spurlin identified the containers and soils to be sampled, as well as the analytical suite (see Table 1). As indicated in Appendix E, the location and types of materials discovered varied. Many of the chemicals, primarily those discovered in the boiler room (see Appendix A, Figure 2), had, according to Mr. Comer, been abandoned by the previous owner; however, others had been purchased by Mr. Comer and were stored in the North Warehouse.

Suspected PCB transformers had been removed from service on Transformer Pads Numbers 1, 2, and 3 (see Appendix A, Figure 2). The oils had been drained by employees of CRP and collected in drums. Additionally, CRP personnel had excavated soils from the area adjacent to Transformer Pads 1 and 2. Excavated soils were placed into large boxes and stored at the facility pending characterization.

OSC Spurlin determined that three samples — two grabs and one composite — would be collected from drums containing transformer oil and analyzed for PCBs; two samples would be collected from suspected drums of flammable liquids for flash point analysis; and a soil sample would be collected from the areas adjacent to Transformer Pads 1 and 2 to ensure that no PCBs remained.

All EPA, TDEC, and Tetra Tech START personnel demobilized from the site at 1900 hours.



## TABLE 1 SAMPLE COLLECTION AND DATA SUMMARY

Sample ID	Туре	Matrix	Analyses	Location Description	Result
CSMM-GD-01	Grab	Oil	PCBs	55-gallon drum marked "T-oil" located outside of the lean-to west of water tower that had, according to Mr. Comer, most likely been drained from Transformer Pad 1	37.1 mg/kg (Arochlor 1260)
CSMM-GD-02	Grab	Oil	PCBs	55-gallon drum marked "Transformer Oil e Back" located in the boiler room	16.3 mg/kg (Arochlor 1260)
CSMM-GD-03	Grab	Liquid	Flash Point	55-gallon drum labeled as ECOLAB Sani Glide, but marked "methanol" in the boiler room	100° Fahrenheit
CSMM-GD-04	Grab	Liquid	Flash Point	55-gallon drum labeled as <i>American Industrial Corporation Isopropanol</i> in the boiler room	80° Fahrenheit
CSMM-CD-01	Composite	Oil	PCBs	Three of the twelve 55-gallon drums marked "T-oil" located outside of the lean-to east of water tower. Oil that had been drained from transformers removed from Transformer Pads 1, 2, & 3	2.2 mg/kg (Arochlor 1260)
CSMM-CS-01	Composite	Soil	PCBs	Soil adjacent to Transformer Pad 1	0.47 mg/kg (Arochlor 1260)
CSMM-CS-02	Composite	Soil	PCBs	Soil adjacent to Transformer Pad 2	1.37 mg/kg (Arochlor 1260)

#### Notes:

CSMM = Clinton Smelter / Magnet Mills CD = composite from drums

CS = composite soil

GD = grab from drum

mg/kg = milligrams per kilogram

#### CONCLUSION

Sample results indicated that the two drums suspected of containing flammable liquids exhibited the characteristic of ignitability. None of the PCB samples indicated concentrations greater the 50 parts per million as necessary for regulation in accordance with Title 40, Code of Federal Regulation, Part 761, Polychlorinated Biphenyls (PCBs) Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions. Based on the site conditions and the sampling results, OSC Spurlin concluded that an emergency removal action was not warranted. However, Mr. Comer was advised to procure the services of a hazardous waste disposal contractor, dispose of all hazardous wastes, and to sell any lots of hazardous materials to avoid the possibility of speculative accumulation.



Mr. S. Spurlin Page 4 August 19, 2008

If you have any questions or need additional copies of this removal assessment letter report, please call me (Chris Draper) at (615) 969-1334 or Andrew Johnson at (678) 775-3100.

Sincerely,

Chris Draper

START III Site Manager

Andrew F. Johnson

START III Program Manager

Enclosure

cc: Katrina Jones, EPA Project Officer

Darryl Walker, EPA Alternate Project Officer

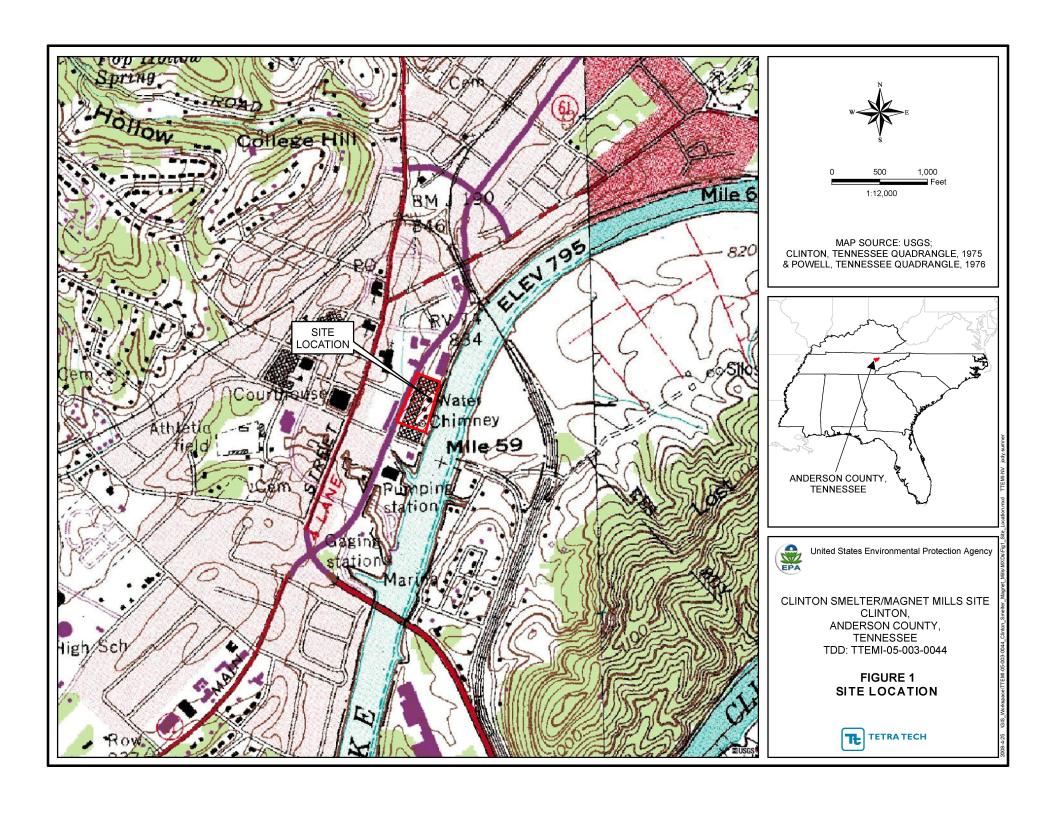
Angel Reed, START Document Control Coordinator

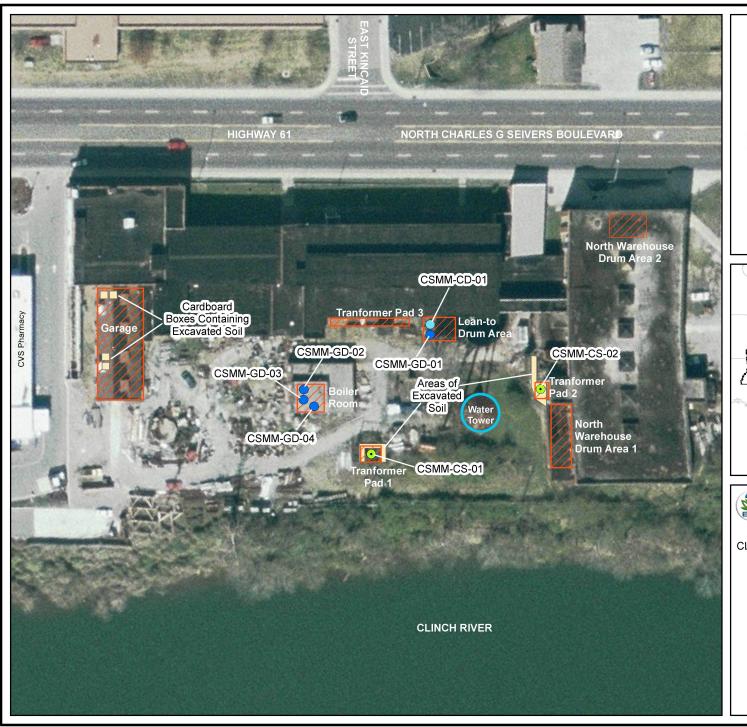


#### **APPENDIX A**

FIGURES (Two Pages)



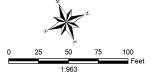




#### LEGEND

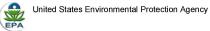
- COMPOSITE DRUM SAMPLING LOCATION
- GRAB DRUM
  SAMPLING LOCATIONS
- COMPOSITE SURFACE SOIL SAMPLING LOCATIONS





SOURCE: USGS; KNOXVILLE, TN HIGH-RES URBAN ORTHO-IMAGERY, 2002.





CLINTON SMELTER/MAGNET MILLS SITE CLINTON, ANDERSON COUNTY,

TENNESSEE TDD: TTEMI-05-003-0044

FIGURE 2 SITE LAYOUT AND SAMPLING LOCATIONS



#### **APPENDIX B**

LOGBOOK NOTES (Nine Pages)



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TIEMI-05-003-0048 P
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	CONTENTS	
PAGE	REFERENCE	DATE
	EUGENE HUANGE, CRP	
	DANS COMER, CRP 304.633.1109	
	TM = OSC Steve SourtIN	
	START = CHRIS DRAFER, SM	
	JOBY SUMNER FTM	
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#### **APPENDIX C**

PHOTOGRAPHIC LOG

(17 Pages)





## OFFICIAL PHOTOGRAPH NO. 1 U.S. ENVIRONMENTAL PROTECTION AGENCY

**Orientation:** Southwest **Date:** 1 May 2008

Photographer: Chris Draper, Tetra Tech Witness: Jody Sumner, Tetra Tech

Subject: Rear of site





## OFFICIAL PHOTOGRAPH NO. 2 U.S. ENVIRONMENTAL PROTECTION AGENCY

Orientation: North Date: 1 May 2008

Photographer: Chris Draper, Tetra Tech Witness: Jody Sumner, Tetra Tech

Subject: Boiler room



## OFFICIAL PHOTOGRAPH NO. 3 U.S. ENVIRONMENTAL PROTECTION AGENCY

Orientation: Northeast Date: 1 May 2008

Photographer: Chris Draper, Tetra Tech Witness: Jody Sumner, Tetra Tech

Subject: Drums in boiler room





## OFFICIAL PHOTOGRAPH NO. 4 U.S. ENVIRONMENTAL PROTECTION AGENCY

Orientation: West Date: 1 May 2008

Photographer: Chris Draper, Tetra Tech Witness: Jody Sumner, Tetra Tech

**Subject:** Drums in boiler room





#### OFFICIAL PHOTOGRAPH NO. 5 U.S. ENVIRONMENTAL PROTECTION AGENCY

Orientation: East Date: 1 May 2008

Photographer: Chris Draper, Tetra Tech Witness: Jody Sumner, Tetra Tech

**Subject:** Transformer Pad #1 with visible staining. Soil in foreground was recently excavated.





## OFFICIAL PHOTOGRAPH NO. 6 U.S. ENVIRONMENTAL PROTECTION AGENCY

**Orientation:** East **Date:** 1 May 2008

Photographer: Chris Draper, Tetra Tech Witness: Jody Sumner, Tetra Tech

**Subject:** Transformer Pad #1, exhibiting visible staining





## OFFICIAL PHOTOGRAPH NO. 7 U.S. ENVIRONMENTAL PROTECTION AGENCY

Orientation: North Date: 1 May 2008

Photographer: Chris Draper, Tetra Tech Witness: Jody Sumner, Tetra Tech

**Subject:** Drums of oil removed from on-site transformers





## OFFICIAL PHOTOGRAPH NO. 8 U.S. ENVIRONMENTAL PROTECTION AGENCY

Orientation: North Date: 1 May 2008

Photographer: Chris Draper, Tetra Tech Witness: Jody Sumner, Tetra Tech

Subject: Drums in lean-to west of water tower. Tetra Tech START personnel observed that

material from one leaking drum was allowed to drain into another empty drum.





## OFFICIAL PHOTOGRAPH NO. 9 U.S. ENVIRONMENTAL PROTECTION AGENCY

Orientation: West Date: 1 May 2008

Photographer: Chris Draper, Tetra Tech Witness: Jody Sumner, Tetra Tech

**Subject:** Transformer Pad #2 with visible staining



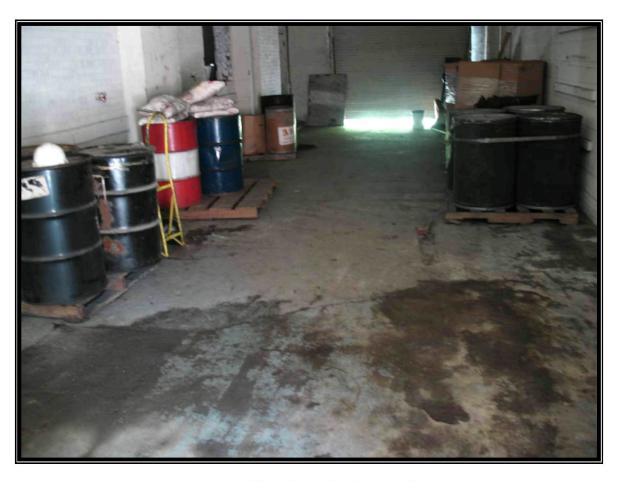
# OFFICIAL PHOTOGRAPH NO. 10 U.S. ENVIRONMENTAL PROTECTION AGENCY

Orientation: West Date: 1 May 2008

Photographer: Chris Draper, Tetra Tech Witness: Jody Sumner, Tetra Tech

**Subject:** Drums of material that where purchased in lots for resale within the north warehouse





# OFFICIAL PHOTOGRAPH NO. 11 U.S. ENVIRONMENTAL PROTECTION AGENCY

Orientation: East Date: 1 May 2008

Photographer: Chris Draper, Tetra Tech Witness: Jody Sumner, Tetra Tech

**Subject:** Drums of material that were purchased in lots for resale within the north warehouse.

The floor in this area was visibly stained.





#### OFFICIAL PHOTOGRAPH NO. 12 U.S. ENVIRONMENTAL PROTECTION AGENCY

Orientation: South Date: 1 May 2008

Photographer: Chris Draper, Tetra Tech Witness: Jody Sumner, Tetra Tech

Subject: Box containing propane cylinders and fluorescent light tubes stored upstairs in the

northern warehouse





## OFFICIAL PHOTOGRAPH NO. 19 U.S. ENVIRONMENTAL PROTECTION AGENCY

Orientation: North Date: 1 May 2008

Photographer: Chris Draper, Tetra Tech Witness: Jody Sumner, Tetra Tech

**Subject:** Drums stored upstairs in northern warehouse





## OFFICIAL PHOTOGRAPH NO. 14 U.S. ENVIRONMENTAL PROTECTION AGENCY

Orientation: North Date: 1 May 2008

Photographer: Chris Draper, Tetra Tech Witness: Jody Sumner, Tetra Tech

**Subject:** Fiber drums stored upstairs within a central warehouse





#### OFFICIAL PHOTOGRAPH NO. 15 U.S. ENVIRONMENTAL PROTECTION AGENCY

Orientation: Northeast Date: 1 May 2008

Photographer: Chris Draper, Tetra Tech Witness: Jody Sumner, Tetra Tech

Subject: Single fiber drum stored near an area of collapsed ceiling within a central warehouse





OFFICIAL PHOTOGRAPH NO. 16 U.S. ENVIRONMENTAL PROTECTION AGENCY

Orientation: Southwest Date: 1 May 2008

Photographer: Chris Draper, Tetra Tech Witness: Jody Sumner, Tetra Tech

**Subject:** Boxes of soil excavated from Transformer Pads #1 and # 2 awaiting characterization

and disposal





OFFICIAL PHOTOGRAPH NO. 17 U.S. ENVIRONMENTAL PROTECTION AGENCY

Orientation: Southwest Date: 1 May 2008

Photographer: Chris Draper, Tetra Tech Witness: Jody Sumner, Tetra Tech

**Subject:** Boxes of soil excavated from Transformer Pads #1 and # 2 awaiting characterization

and disposal



#### **APPENDIX D**

TABLE OF WITNESSES (One Page)



## TABLE OF WITNESSES CLINTON SMELTER/MAGNET MILLS SITE CLINTON, ANDERSON COUNTY, TENNESSEE

Mr. Steve Spurlin
Federal On-Scene Coordinator
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Telephone No.: (731) 394-8996 Email: <a href="mailto:spurlin.steve@epa.gov">spurlin.steve@epa.gov</a>

Mr. Chris Draper Site Manager Superfund Technical Assessment and Response Team (START) Tetra Tech EM Inc. (Tetra Tech) 712 Melrose Avenue Nashville, TN 37211 Telephone No.: (615) 969-1334

Mr. Jody Sumner GIS Analyst / Field Team Member START Tetra Tech 712 Melrose Avenue Nashville, TN 37211

Email: chris.draper@ttemi.com

Telephone No.: (615) 252-4795 Email: jody.sumner@ttemi.com

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Email: <u>burl.maupin@state.tn.us</u>

Mr. David Comer Clinch River Properties, L.L.C. 1453 Campbell Station Road Knoxville, TN 37932 Telephone No.: (304) 633-1109

Mr. Yuh-Ching (Eugene) Huang Clinch River Properties, L.L.C. 1453 Campbell Station Road Knoxville, TN 37932

Telephone No.: (304) 633-1109



### **APPENDIX E**

### INVENTORY OF MATERIALS DISCOVERED (One Page)



### INVENTORY OF MATERIALS DISCOVERED

Material Description	Location	Quantity	Volume or Weight	
Adkleen ethylene glycol monobutyl ether	Boiler room	2	55-gallon	
American Industrial Corporation Isopropanol	Boiler room	1	55-gallon	
Betco Scorch Plus Vegetation Killer	Boiler room	1	30-gallon	
Black, metal of suspected oil	Boiler room	1	55-gallon	
Blue, metal marked "Transformer Oil e Back"	Boiler room	1.	55-gallon	
Blue, metal of water	Boiler room	1	30-gallon	
Blue, poly of oil	Boiler room	2	55-gallon	
Blue, poly of oil-contaminated oil dry	Boiler room	1.	55-gallon	
Blue, poly of suspected detergent/surfactant	Boiler room	1	55-gallon	
Diversey Corporation Master Kleen	Boiler room	1	55-gallon	
Drum labeled as ECOLAB Sani Glide marked "methanol"	Boiler room	1	55-gallon	
Drum of water labeled methanol	Boiler room	1	55-gallon	
ECOLAB Excelerate CIP with sodium hydroxide	Boiler room	1	55-gallon	
ECOLAB Matrix	Boiler room	1,	55-gallon	
Ethanol	Boiler room	1.	55-gallon	
Grease	Boiler room	1	10-gallon	
Mobilite 22 Grease	Boiler room	1.	55-gallon	
PB&S Methanol	Boiler room	6	55-gallon	
Steel dust	Boiler room	2	55-gallon	
Texaco Oil	Boiler room	1	55-gallon	
Texaco Transformer Oil	Boiler room	1	55-gallon	
Unknown black, metal drum	Boiler room	1	55-gallon	
Unknown blue, poly drum with pH 9	Boiler room	3	55-gallon	
Water Services, Inc. B-6 Conditioner	Boiler room	1	30-gallon	
Water Services, Inc. Deionized water	Boiler room	2	55-gallon	
Water Services, Inc. Poly Plex	Boiler room	1	30-gallon	
Water Services, Inc. Scaletrol	Boiler room	1	30-gallon	
Water Services, Inc. Scaletrol	Boiler room	1	30-gallon	
White, poly marked "Hydro Oil"	Boiler room	1	55-gallon	
White, poly marked "soap"	Boiler room	î	55-gallon	
White, poly marked "Transformer Oil e Back"	Boiler room	1	55-gallon	
Windshield cleaner	Boiler room	13	10-gallon	
Hydraulic oil	Garage	2	55-gallon	
Soil excavated from transformer Pad #1 and #2	Garage	4	4 cubic foot box	
Blue, metal stenciled "transformer oil"	Lean-to west of water tower	1	55-gallon	
Transformer oil drained from site transformers	Lean-to west of water tower	12	55-gallon	
Conoco Oil Dectol R&O Oil 460	North warehouse, first floor	9	55-gallon	
Graphite dust	North warehouse, first floor	4	55-gallon	
Grease	North warehouse, first floor	4	55-gallon	
Home Care Products Laundry Detergent	North warehouse, first floor	1	30-gallon	
Kutwell 40 cutting oil	North warehouse, first floor	1	55-gallon	
Metallurgy Quench Salt	North warehouse, first floor	5	50-pound	
Mobil Oil SHC 634	North warehouse, first floor	4	55-gallon	
Park Chemical Corporation AAA Quench Oil	North warehouse, first floor	1	55-gallon	
Penreco Snow White Petrolatum	North warehouse, first floor	2	55-gallon	
Rohm & Haas Tamol 731	North warehouse, first floor	3	5-gallon	
Unknown green drum of organic liquid	North warehouse, first floor	1	30-gallon	
Versa TL – sulfonated polystyrene	North warehouse, first floor			
Versa TL – sulfonated polystyrene  Versa TL – sulfonated polystyrene	North warehouse, first floor North warehouse, first floor	6	50-pound 55-gallon	
Wright Chemical Corp. Water Treatment Compound	The second secon	3		
<u> </u>	North warehouse, first floor		55-gallon 55-gallon	
Wurco Adhesive	North warehouse, first floor	1		
Zimmite Corporation Cooling Water Treatment	North warehouse, first floor	1	55-gallon	
Cook Composites and Polymers Stypol 040-4917	North warehouse, second floor	2	55-gallon	
Eastman 5 LiSIPA (5-(Sodiosulfo) Isophthalic Acid)	North warehouse, second floor	16	55-gallon	
Rail Curve Lubricant	North warehouse, second floor	13	55-gallon	
Reichold Polylite with1,3-benzene carboxylic acid	North warehouse, second floor	5	55-gallon	
Silmar Corporation Resin, Batch 302555	North warehouse, second floor	1.	55-gallon	



### **APPENDIX F**

### TETRA TECH CURSORY DATA VALIDATION REPORT (Eight Pages)





June 3, 2008

Mr. Steve Spurlin On-Scene Coordinator U.S. Environmental Protection Agency, Region 4 61 Forsyth Street, SW, 11th Floor Atlanta, GA 30303

**Subject:** Clinton Smelter/Magnet Mills Site

Technical Direction Document Number (No.) TTEMI-05-003-0044

Contract No. EP-W-05-054 (START III Region 4)

**Cursory Data Validation Report** 

TestAmerica Analytical Testing Corporation Report No. NRE0234 Analytical Parameters: Polychlorinated biphenyls and flashpoint

Laboratory Report No.:	NRE0234
Samples:	CSMM-GD-01, CSMM-GD-02, CSMM-GD-03, CSMM-GD-04, CSMM-CD-01, CSMM-CS-01, and CSMM-CS-02
Field Duplicate Pairs:	None
Field Blanks:	None

Dear Mr. Spurlin:

The Tetra Tech Superfund Technical Assessment and Response Team (START) conducted data validation on the analytical results for three oil samples, two soil samples, and two aqueous samples that were collected at the Clinton Smelter/Magnet Mills Site in Clinton, Tennessee, on May 1, 2008. The samples were analyzed under laboratory report number NRE0234 by TestAmerica Analytical Testing Corporation (TestAmerica) of Nashville, Tennessee. The oil and soil samples were analyzed for polychlorinated biphenyls (PCB) as Aroclors by SW-846 Method 8082 and the aqueous samples were analyzed for flash point by SW-846 Method 1010.

Analytical data were evaluated in general accordance with all applicable data validation guidance documents, including the following: the U.S. Environmental Protection Agency (EPA) Contract Laboratory Program National Functional Guidelines (NFG) for Organic Data Review (EPA October 1999) and the NFG for Inorganic Data Review (EPA October 2004). The analytical methods used by TestAmerica during this project provide guidance on procedures and method acceptance criteria that, in some areas, differ from the NFGs. Where the methods and the NFGs differ, the data validators followed the acceptance criteria in the methods. In addition, if laboratory-derived acceptance criteria were presented in the TestAmerica data package, then these criteria were used to evaluate the data, unless the criteria were considered inadequate.

Data were evaluated based on the following criteria:

- Data Completeness \*
- Sample Preservation, Sample Receipt, and Holding Times
- Laboratory Blanks\*
- Surrogates
- Laboratory Control Samples (LCS) and Laboratory Control Sample Duplicates (LCSD)\*
- Matrix Spike/Matrix Spike Duplicates (MS/MSD)\*

Mr. S. Spurlin June 3, 2008

- Laboratory Duplicate Samples \*
- Dilution and Reported Detection Limits
- Analyte Identification and Quantitation
- \* All QC criteria were met for this evaluated parameter. Those criteria without an asterisk (\*) displayed a deficiency that is described later in this report that may or may not result in qualification of data.

The following efficient and effective data validation approach was used for providing an abbreviated assessment of the quality of the set of data. Data evaluation consisted of a review of the data with a focus on the available review parameters present in the summary data package (which typically does not include the raw data). This review was not a complete assessment of all possible quality control parameters or even of each quality control parameter that was reviewed. The review, rather, was intended to efficiently identify and focus on those problems and quality control deficiencies that could be readily identified from the summary data package. Because of the nature of this approach, some problems and deficiencies may not have been identified; as such, this approach may not support some critical uses and required limits on decision-making uncertainty for the data.

Enclosure 1 presents copies of the sample results sheets from the laboratory data packages, with hand-entered qualifications from the data validation effort. Enclosure 2 presents the same data validation-qualified analytical results in table format.

#### **DATA REVIEW RESULTS**

The following sections discuss the data package and provide an overall assessment of the data. This discussion concentrates on the irregularities associated with the various parameters as indicated above.

### SAMPLE PERSERVATION, SAMPLE RECEIPT, and HOLDING TIMES

There were no problems with holding times. However, the sample temperature on receipt at the laboratory was 8.2 degrees, above the acceptable range of 2 to 6 degrees. Therefore, the reported flash point temperatures, which are strongly influenced by the volatile organic content of the samples, were qualified as estimated (flagged "J") and may be biased high for samples CSMM-GD-03 and CSMM-GD-04. PCBs are not a major concern because they are extremely stable under environmental conditions, so PCB results were not qualified based on the elevated sample temperature.

#### **SURROGATES**

All surrogate recoveries were within the laboratory-established limits except for the second surrogate, decachlorobiphenyl, for samples CSMM-CS-01 and CSMM-CS-02, which yielded high recoveries. Therefore, the detected Aroclor 1260 results for samples CSMM-CS-01 and CSMM-CS-02 were qualified as estimated (flagged "J") and may be biased high.

#### **DILUTION and REQUIRED REPORTING LIMITS**

Required reporting limits were met. However, the PCB extract for sample CSMM-GD-01 was diluted 5-fold and the PCB extract for sample CSMM-CS-02 was diluted 10-fold to minimize interference from target and other organic compounds. No qualifications were made for these dilutions.

### ANALYTE IDENTIFICATION AND QUANTITATION

In the PCB analysis for sample CSMM-CS-02, the quantitative results for Aroclor 1260 from the two chromatographic columns were considerably different, apparently because the weathered field sample



Mr. S. Spurlin June 3, 2008

was a poor match to the analytical standard. Therefore, the result for Aroclor 1260 was qualified as estimated (flagged "J") for sample CSMM-CS-02.

### **OVERALL ASSESSMENT OF DATA**

The overall quality of this data package was good. No results were rejected. Results for flash point in samples CSMM-GD-03 and CSMM-GD-04 were qualified as estimated because of inadequate preservation and possible loss of volatiles during shipping. Detected Aroclor 1260 results for samples CSMM-CS-01 and CSMM-CS-02 were qualified as estimated because of high surrogate recoveries. The Aroclor 1260 result for sample CSMM-CS-02 was qualified as estimated because quantitative results between the two columns were considerably different.

Please call me at (678) 775-3104 if you have any questions regarding this data validation report.

Sincerely.

Jessica Vickers

START III Quality Assurance Manager

Enclosures (2)

cc: Katrina Jones, EPA Project Officer

Darryl Walker, EPA Alternate Project Officer

Angel Reed, Tetra Tech START III Document Control Coordinator

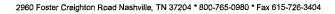


### **ENCLOSURE 1**

## FIXED LABORATORY ANALYTICAL RESULTS SHEETS WITH HAND-ENTERED DATA VALIDATION QUALIFIERS FOR TESTAMERICA ANALYTICAL TESTING CORPORATION WORK ORDER NO. NRE0234

(Two Pages)







THE LEADER IN ENVIRONMENTAL TESTING

Client Tetra Tech EMI (7610)

712 Melrose Avenue

Nashville, TN 37211

Attn Chris Draper

Work Order:

NRE0234

Project Name:

Tetra Tech (TN)

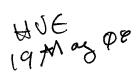
Project Number:

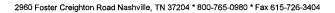
Clinton Smelter/Magnet Mills Site

Received:

05/02/08 14:15

						Dilution	Analysis		
Analyte	Result	Flag	Units	MDL	MRL	Factor	Date/Time	Method	Batch
Sample ID: NRE0234-01 (CSMM-0	5D-01 - Oil	) Sample	1: 05/01/08	8 15:24					
Polychlorinated Biphenyls in Oil by EP		-							
PCB-1016	ND		mg/kg	0.0456	0.162	5	05/05/08 15:36	SW846 8082	8050296
PCB-1221	ND		mg/kg	0.131	0.162	5	05/05/08 15:36	SW846 8082	8050296
PCB-1232	ND		mg/kg	0.0728	0.162	5	05/05/08 15:36	SW846 8082	805029
PCB-1242	ND		mg/kg	0.0777	0.162	5	05/05/08 15:36	SW846 8082	805029
PCB-1248	ND		mg/kg	0.141	0.162	5	05/05/08 15:36	SW846 8082	805029
PCB-1254	ND		mg/kg	0.0825	0.162	5	05/05/08 15:36	SW846 8082	8050296
PCB-1260	37.1		mg/kg	0.131	0.162	5	05/05/08 15:36	SW846 8082	8050296
urr: Tetrachloro-meta-xylene (15-150%)	50 %						05/05/08 15:36	SW846 8082	805029
Surr: Decachlorobiphenyl (10-146%)	100 %					5		SW846 8082	805029
arr. Decaemor corpnersy: (10-14079)	100 %					5	05/05/08 15:36	SW 040 8002	003023
Sample ID: NRE0234-02 (CSMM-C	GD-02 - Oil	) Sampleo	d: 05/01/08	8 16:08					
Polychlorinated Biphenyls in Oil by EPA	A Method 80	82							
PCB-1016	ND		mg/kg	0.00904	0.0320	1	05/05/08 14:35	SW846 8082	8050296
PCB-1221	ND		mg/kg	0.0260	0.0320	1	05/05/08 14:35	SW846 8082	805029 <del>6</del>
PCB-1232	ND		mg/kg	0.0144	0.0320	I	05/05/08 14:35	SW846 8082	8050296
PCB-1242	ND		mg/kg	0.0154	0.0320	1	05/05/08 14:35	SW846 8082	8050296
PCB-1248	ND		mg/kg	0.0279	0.0320	1	05/05/08 14:35	SW846 8082	8050296
PCB-1254	ND		mg/kg	0.0163	0.0320	1	05/05/08 14:35	SW846 8082	8050296
PCB-1260	16.3		mg/kg	0.0260	0.0320	1	05/05/08 14:35	SW846 8082	8050296
Surr: Tetrachloro-meta-xylene (15-150%)	82 %					1	05/05/08 14:35	SW846 8082	805029
Surr: Decachlorobiphenyl (10-146%)	84 %					1	05/05/08 14:35	SW846 8082	805029
Commit VD. NIDE0224 02 (CCMAA)	N 02 W	tow Com	-1-4. OF/O	1/00 17.10					
Sample ID: NRE0234-03 (CSMM-C General Chemistry Parameters	3D-03 - M	iter) Sam	pieu: 05/0.	1/09 10:10					
	100	7		NIA	NT 4	1	05/05/00 00 55	CW046 1010	0050493
Flashpoint	100	3	Deg F	NA	NA	1	05/05/08 08:55	SW846 1010	8050483
Sample ID: NRE0234-04 (CSMM-C	GD-04 - Wa	iter) Sam	pled: 05/0	1/08 16:20					
General Chemistry Parameters						•			
Flashpoint	80.0	Ž	Deg F	NA	NA	1	05/05/08 08:55	SW846 1010	8050483
Sample ID: NRE0234-05 (CSMM-C	TD 01 OST	Sampled	1. 0 <i>Z/</i> 01/00	15.21					
Polychlorinated Biphenyls in Oil by EPA			1. 05/01/00	13.31					
		.02	. п	0.00013	0.0323	1	05/05/00 14.55	C111016 0000	8050296
PCB-1016	ND ND		mg/kg	0.00913 0.0262	0.0323	1 I	05/05/08 14:55	SW846 8082 SW846 8082	8050296
PCB-1221 PCB-1232	ND ND		mg/kg	0.0262	0.0323	1	05/05/08 14:55 05/05/08 14:55	SW846 8082	8050296
PCB-1232	ND		mg/kg mg/kg	0.0146	0.0323	1	05/05/08 14:55	SW846 8082	805029
PCB-1248	ND		mg/kg mg/kg	0.0133	0.0323	1	05/05/08 14:55	SW846 8082	805029
PCB-1254	ND		mg/kg	0.0262	0.0323	1	05/05/08 14:55	SW846 8082	805029
PCB-1260	2.20		mg/kg mg/kg	0.0262	0.0323	1	05/05/08 14:55	SW846 8082	805029
'urr: Tetrachloro-meta-xylene (15-150%)			mg/kg	0.0202	0.0323				805029
• • • • • • • • • • • • • • • • • • • •	84 %					1	05/05/08 14:55	SW846 8082	
Surr: Decachlorobiphenyl (10-146%)	86 %					1	05/05/08 14:55	SW846 8082	805029







Client

Attn

Tetra Tech EMI (7610)

712 Melrose Avenue

Nashville, TN 37211

Chris Draper

Work Order:

NRE0234

Project Name:

Tetra Tech (TN)

Project Number:

Clinton Smelter/Magnet Mills Site

Received:

05/02/08 14:15

### ANALYTICAL REPORT

			7 82 17 883 4 3	TCAL KEI O					
Analyte	Result	Flag	Units	MDL	MRL	Dilution Factor	Analysis Date/Time	Method	Batch
Sample ID: NRE0234-06 (CSMM-0	CS-01 - Soil)	Sampled	i: 05/01/08	3 16:20					
Polychlorinated Biphenyls by EPA Met	hod 8082		~						
PCB-1016	ND		mg/kg	0.00940	0.0333	i	05/05/08 11:52	SW846 8082	8050295
PCB-1221	ND		mg/kg	0.0270	0.0333	1	05/05/08 11:52	SW846 8082	8050295
PCB-1232	ND		mg/kg	0.0150	0.0333	1	05/05/08 11:52	SW846 8082	8050295
PCB-1242	ND		mg/kg	0.0160	0.0333	1	05/05/08 11:52	SW846 8082	8050295
PCB-1248	ND		mg/kg	0.0290	0.0333	1	05/05/08 11:52	SW846 8082	8050295
PCB-1254	ND		mg/kg	0.0170	0.0333	1	05/05/08 11:52	SW846 8082	8050295
PCB-1260	0.470	•	mg/kg	0.0270	0.0333	1	05/05/08 11:52	SW846 8082	8050295
Surr: Tetrachloro-meta-xylene (15-150%)	80 %					1	05/05/08 11:52	SW846 8082	8050295
Surr: Decachlorobiphenyl (10-150%)	168 %	ZX				1	05/05/08 11:52	SW846 8082	8050295
Sample ID: NRE0234-07 (CSMM-C	CS-02 - Soil)	Sampled	l: 05/01/08	3 16:40					
Polychlorinated Biphenyls by EPA Met	hod 8082								
PCB-1016	ND		mg/kg	0.0940	0.333	10	05/05/08 12:53	SW846 8082	8050295
PCB-1221	ND		mg/kg	0.270	0.333	10	05/05/08 12:53	SW846 8082	8050295
PCB-1232	ND		mg/kg	0.150	0.333	10	05/05/08 12:53	SW846 8082	8050295
PCB-1242	ND		mg/kg	0.160	0.333	10	05/05/08 12:53	SW846 8082	8050295
PCB-1248	ND		mg/kg	0.290	0.333	10	05/05/08 12:53	SW846 8082	8050295
PCB-1254	ND		mg/kg	0.170	0.333	10	05/05/08 12:53	SW846 8082	8050295
PCB-1260	1.37	R10	mg/kg	0.270	0.333	10	05/05/08 12:53	SW846 8082	8050295
Surr: Tetrachloro-meta-xylene (15-150%)	20 %		3 0			10	05/05/08 12:53	SW846 8082	8050295
Surr: Decachlorobiphenyl (10-150%)	340 %	ZX				10	05/05/08 12:53	SW846 8082	8050295

HJE 19 June Ø8

### **ENCLOSURE 2**

### DATA VALIDATION-QUALIFIED FIXED LABORATORY ANALYTICAL RESULTS FOR TESTAMERICA ANALYTICAL TESTING CORPORATION WORK ORDER NO. NRE0234

(One Page)



### DATA VALIDATION-QUALIFIED FIXED LABORATORY ANALYTICAL RESULTS FOR TESTAMERICA ANALYTICAL TESTING CORPORATION, INC. REPORT NO. NRE0234

Sample Designation:	CSMM-GD-01	CSMM-GD-02	CSMM-GD-03	CSMM-GD-04	CSMM-CD-01	CSMM-CS-01	CSMM-CS-02				
Sample Collection Date:	5/1/2008	5/1/2008	5/1/2008	5/1/2008	5/1/2008	5/1/2008	5/1/2008				
Polychlorinated Biphenyl	Polychlorinated Biphenyl Compounds (mg/kg)										
Aroclor-1016	0.162 U	0.0320 U	NA	NA	0.0323 U	0.0333 U	0.333 U				
Aroclor-1221	0.162 U	0.0320 U	NA	NA	0.0323 U	0.0333 U	0.333 U				
Aroclor-1232	0.162 U	0.0320 U	NA	NA	0.0323 U	0.0333 U	0.333 U				
Aroclor-1242	0.162 U	0.0320 U	NA	NA	0.0323 U	0.0333 U	0.333 U				
Aroclor-1248	0.162 U	0.0320 U	NA	NA	0.0323 U	0.0333 U	0.333 U				
Aroclor-1254	0.162 U	0.0320 U	NA	NA	0.0323 U	0.0333 U	0.333 U				
Aroclor-1260	37.1	16.3	NA	NA	2.20	0.470 J	1.37 J				
Flashpoint (degrees Fahre	enheit)										
Flashpoint	NA	NA	100 J	80.0 J	NA	NA	NA				

#### Notes:

mg/kg = Milligrams per kilogram

J = The analyte was positively identified; the associated value is the approximate concentration of the analyte in the sample.

U = The analyte was analyzed for, but was not detected at or above the associated value.

UJ = The analyte was analyzed for, but was not detected at or above the associated value, which is considered approximate due to deficiencies in one or more quality control criteria.

NA = The sample was not analyzed for this analyte.



### **ATTACHMENT 1**

TENNESSEE DEPARTMENT OF ENVIRONMENT AND CONSERVATION TRIP REPORTS FROM APRIL 3 AND 7, 2008

(24 Sheets)



### TDEC DIVISION OF REMEDIATION, KNOXVILLE

### <u>CLINTON SMELTER / MAGNET MILLS</u> CLINTON, ANDERSON COUNTY, TENNESSEE 37716

### TRIP REPORT

DATE OF VISIT: April 3, 2008

OWNER/FACILITY: Clinch River Properties / smelter used by the Eades, Mixter, and Heald Zinc

Company, and the Magnet Knitting Mill

DOR SITE Number: 01-500

TYPE FACILITIES: inactive lead/zinc ore smelting

hosiery mill 1906-1967, unknown 1967-present

ADDRESS: Cullom Street, Clinton Quadrangle (137-SW)

PURPOSE OF VISIT: Limited, initial investigation of potential contamination from past

manufacturing, spills, storage piles

WEATHER CONDITIONS: rain

SAMPLES COLLECTED: surface soil PHOTOS TAKEN: no

COMMENTS: Ore from a mill near Lead Mine Bend, Union County, was smelted in Clinton. The ruins of an old zinc smelter are shown on the 1910 Sanborn map.

Magnet Mills, Inc. of Clinton, Tennessee, opened its doors in 1906 as Magnet Knitting Mills. In 1929, the Mill was incorporated as Magnet Mills, Inc., a locally owned and operated hosiery mill. In March 1967, the mill was closed down permanently.

The exact location of contamination from the inactive zinc smelter operations is unknown, at this time. A location believed to be near the old smelter site was viewed from the existing railroad at the northern boundary of Parcel 28, map 074J. Mounds of dirt appeared to cover the level portion of the area east of the elevated Charles G. Seivers Boulevard, which may cover some spill areas, storage areas, and contamination due to the smelter operations. Nearer the river, a very steep slope could not be inspected. An eroded spot appeared to show a dark substance, which was indicated to contain 500 ppm lead and 40 ppm arsenic (XRF analysis of sample prepared in KFO lab).

The southern end of this parcel, only one block from the Anderson County Courthouse, was observed from a roadway entering the property at the CVS Pharmacy. This portion of the property contains the inactive Magnet Mills, Inc. Industrial equipment was observed to be scattered about the ground. Unempty drums and containers with unknown contents, batteries, tanks, electric and gasoline motors, fluorescent tubes, cars, and unknown materials were observed outside the several industrial buildings. Six warehouse-type buildings built from 1905-

### TDEC DIVISION OF REMEDIATION, KNOXVILLE

### <u>CLINTON SMELTER / MAGNET MILLS</u> CLINTON, ANDERSON COUNTY, TENNESSEE 37716

### TRIP REPORT

1926 are at the site. Base area of all the buildings on the property covered approximately 85,000 square feet. Most of these buildings had multiple floors. At least one building was partially collapsed. The interiors of the buildings were not inspected.

One building, at the central portion of the property, appeared to be in use by a trucking business.

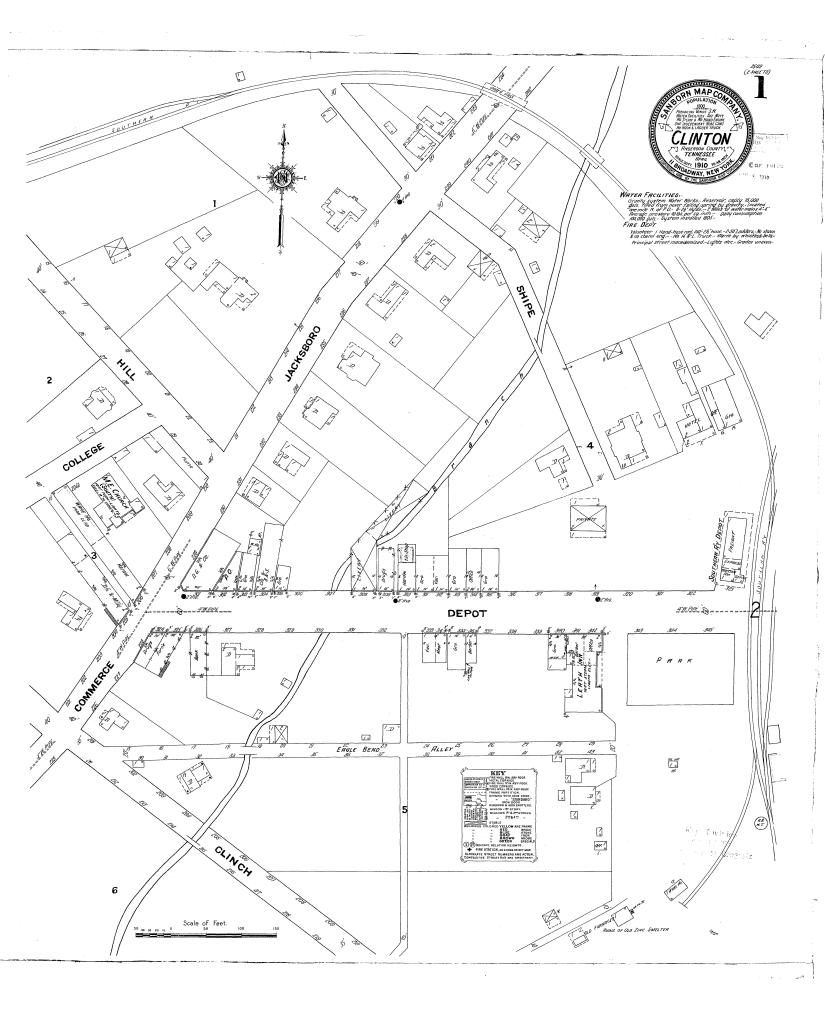
Further investigation is recommended.

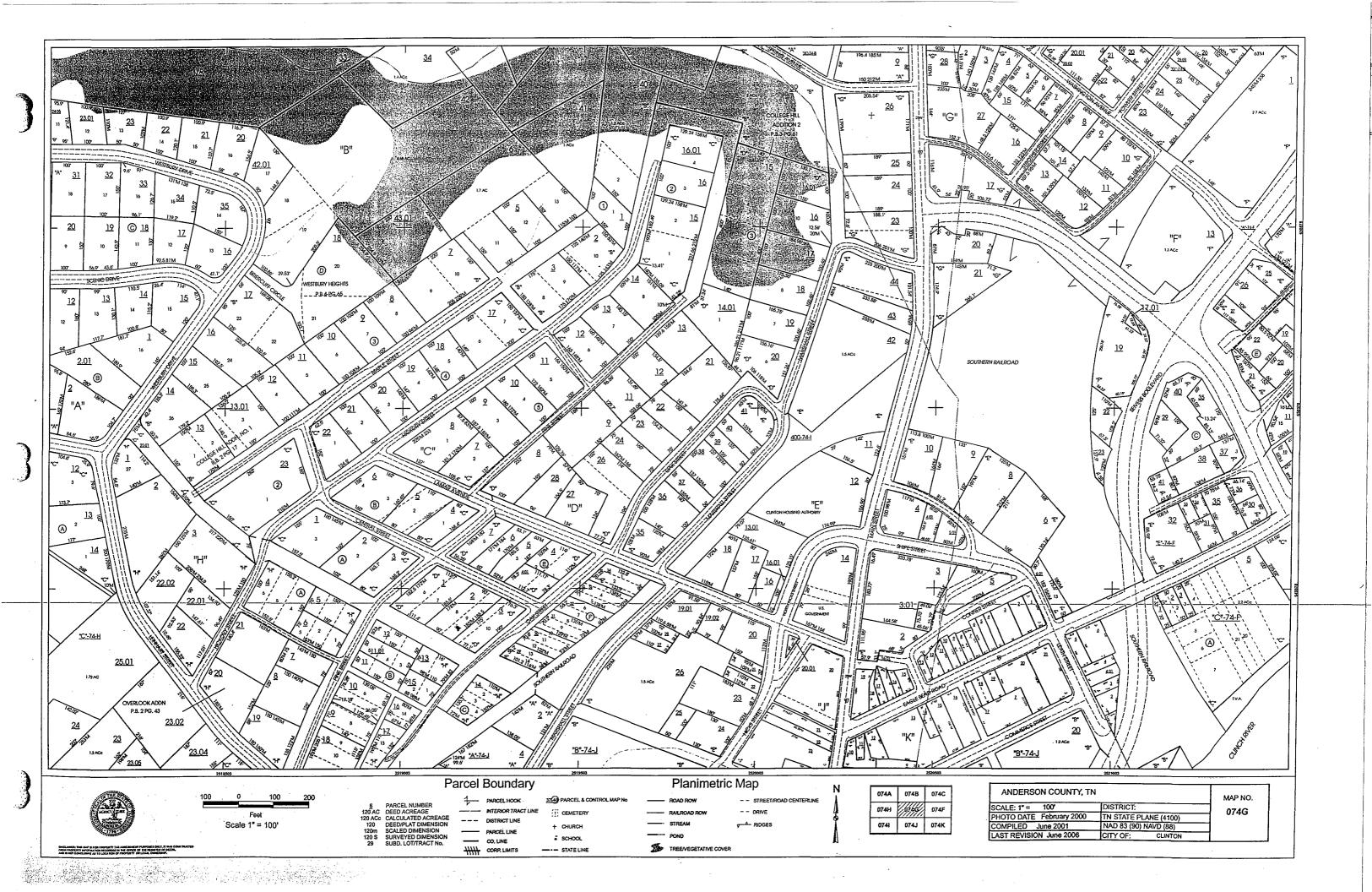
Burl H. Maupin April 4, 2008

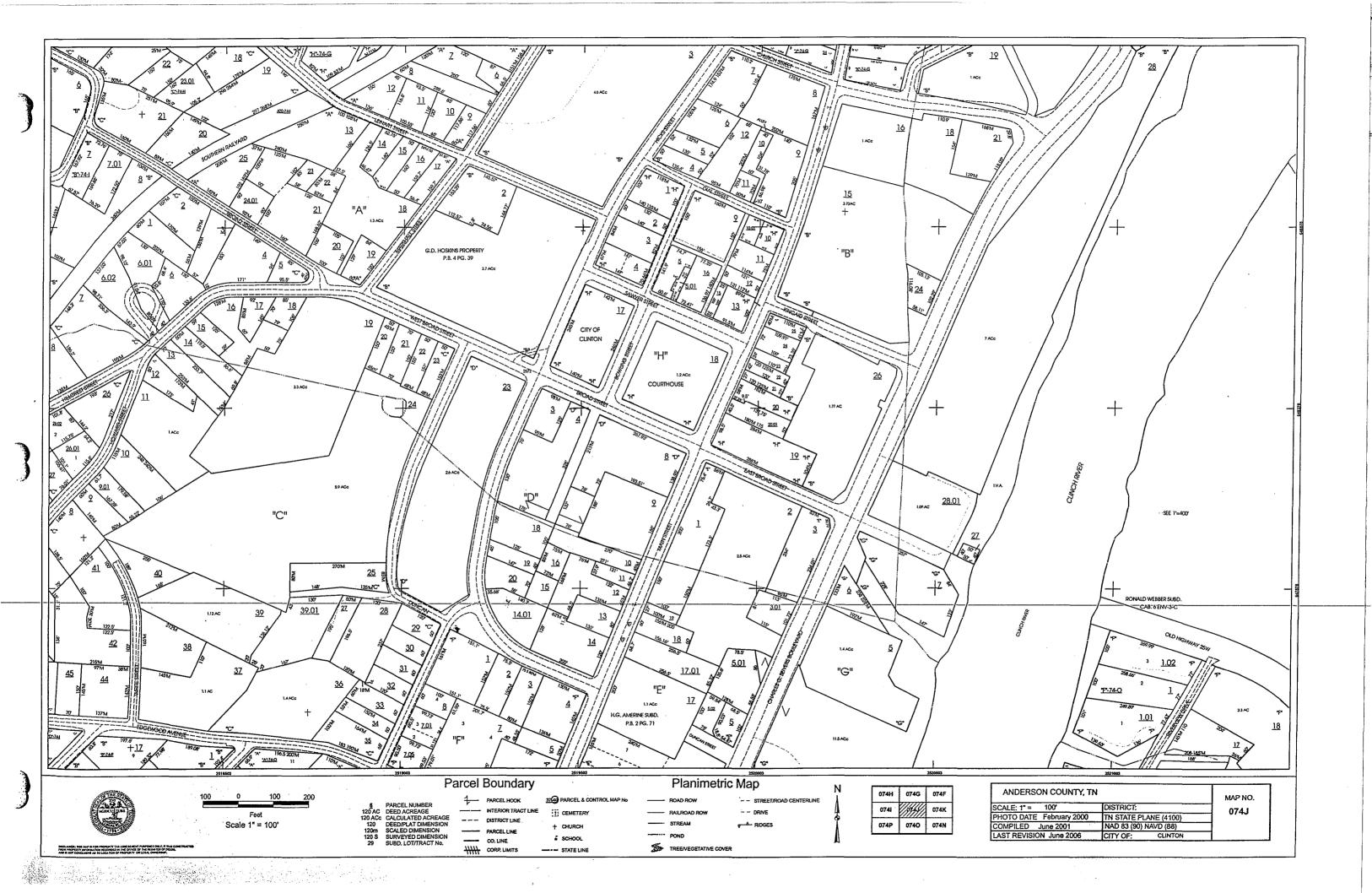
Attachments: Sanborn Map

Property Maps 074G and 074J

cc: David Randolph – DOR Central Office DOR/KFO Anderson Co. General File







# TDEC DIVISION OF REMEDIATION KNOXVILLE

### <u>CLINTON SMELTER / MAGNET MILLS</u> CLINTON, ANDERSON COUNTY, TENNESSEE 37716

### TRIP REPORT

DATE OF VISIT: April 7, 2008

OWNER/FACILITY: Clinch River Properties / smelter used by the Eades, Mixter, and Heald Zinc

Company, and the Magnet Knitting Mill

DOR SITE Number: 01-500

TYPE FACILITIES: inactive lead/zinc ore smelting

hosiery mill 1906-1967, unknown 1967-present

ADDRESS: Cullom Street, Clinton Quadrangle (137-SW)

PURPOSE OF VISIT: Limited investigation of potential contamination from past manufacturing,

spills, storage piles

WEATHER CONDITIONS: sunny, warm

SAMPLES COLLECTED: no PHOTOS TAKEN: yes

COMMENTS: A previous trip report was dated April 4, 2008.

Magnet Mills, Inc. of Clinton, Tennessee, opened its doors in 1906 as Magnet Knitting Mills. In 1929, the Mill was incorporated as Magnet Mills, Inc., a locally owned and operated hosiery mill. In March 1967, the mill was closed down permanently.

Chris Andel and Burl Maupin entered the site at the southern end of the property, only one block from the Anderson County Courthouse, at an unrestricted roadway entering the property from the CVS Pharmacy's parking lot. Industrial equipment was observed to be scattered about the ground. Unempty drums and containers with unknown contents, transformers, batteries, tanks, electric and gasoline motors, fluorescent tubes, cars, and unknown materials were observed. Six warehouse-type buildings built from 1905-1926 are at the site. Base area of all the buildings on the property covered approximately 85,000 square feet. Most of these buildings had multiple floors. At least one building was partially collapsed. Only limited portions of the interiors of the buildings were inspected.

Observations indicated potential concern for the presence of asbestos contaminated materials, contaminated soils, and containers of transformer oil, pesticides, volatile organics, and unknown substances. Selected photographs are attached.

# TDEC DIVISION OF REMEDIATION KNOXVILLE

## CLINTON SMELTER / MAGNET MILLS CLINTON, ANDERSON COUNTY, TENNESSEE 37716

### **TRIP REPORT**

Further investigation is recommended.

Burl H. Maupin

April 7, 2008

Attached photographs: batteries

contaminated soil methyl ethyl ketone

pesticide

tank and fluorescent tubes

tank

transformer oil

transformers 1

transformers 2

unknown 1

unknown 2

unknown 3

unknown 4

unknown 5

unknown and contaminated soil 1 unknown and contaminated soil 2 unknown pink liquid at transformers

cc: David Randolph – DOR Central Office DOR/KFO Anderson Co. General File

































